



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,350	07/17/2003	Ryoichi Kawada	030838	8925
38834	7590	04/20/2007	EXAMINER	
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			VO, TUNG T	
		ART UNIT		PAPER NUMBER
		2621		
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	04/20/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/620,350	KAWADA ET AL.	
	Examiner	Art Unit	
	Tung Vo	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 February 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3 and 5 is/are pending in the application.
 4a) Of the above claim(s) 2,4 and 6-18 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1 is/are rejected.
 7) Claim(s) 3 and 5 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 17 July 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>02/13/07, 10/30/03</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the Species I (claims 1, 3, and 5) in the reply filed on 02/13/07 is acknowledged. The traversal is on the ground(s) that the search in the Species I encompass the search of Species II and III. This is not found persuasive because different searches are performed in different embodiments. In particular, the search is performed for an image matching device which performs an image matching by using an iterative gradient method for iteratively estimating at least one of motion and parallax of a video on a block-by-block basis based on an initial displacement vector as specified in class 382 and subclass 284; and the search for an image matching device for at least one of automatically estimating motion in a motion picture and automatically detecting a corresponding point between stereo videos formed of a left eye and right eye images specified in class 348 and subclass 42, and class 375 and subclass 240.16. The searches are different from each other. The requirement is still deemed proper and is therefore made FINAL.

2. Claims 2, 4, and 6-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected claims, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 02/13/07.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Naito et al. (US 6,430,224 B1).

Re claim 1, Naito discloses an image matching device (54 of fig. 1) for at least one of automatically estimating motion in a motion picture and automatically detecting a corresponding point between stereo videos formed of a left eye and right eye images (Input left and Right Input, 11 and 31 of fig. 1), comprising: matching means (S3 of fig. 2) for performing a matching processing upon a video; characteristic amount extraction means (S4-S5 of fig. 2) for extracting a characteristic amount of a matching information signal (vector) output from the matching means; and conversion parameter determination means (S6-S8 of fig. 2) for determining a parameter for a motion estimation processing upon an input video (MOTION VECTOR (2) of fig. 3A) or a parameter for a detection processing (PARALLAX VECTOR (1) of fig. 3) of the corresponding point between the left eye and right eye images based on the characteristic amount, wherein the matching means (S8 of fig. 2) performs the matching processing by using the parameter determined in the conversion parameter determination means (see also fig. 3A, 3B, and 3C).

Allowable Subject Matter

5. Claims 3 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Naito does not particularly teach wherein the matching means performs the image matching processing by an iterative gradient method in which a differential vector calculated based on a horizontal and vertical gradients of a pixel value and the difference between motion-compensated fields (frames) by the initial displacement motion vector is multiplied by the conversion parameter determined in the conversion parameter determination means and the result of multiplication is added to the initial displacement motion vector, so that a vector is obtained as specified in claim 3; wherein the matching means performs the image matching processing by an iterative gradient method in which a number is added to or subtracted from a differential vector calculated based on a horizontal and vertical gradients of a pixel value and the difference between motion-compensated fields (frames) by the initial displacement motion vector and the resultant added or subtracted value is added to the initial displacement motion vector, so that a vector is obtained as specified in claim 5.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Urano et al. (US 5767,898) discloses three-dimensional image coding by merger of left and right images.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tung Vo
Primary Examiner
Art Unit 2621